

AAI Education Committee Highlight: Teaching Tools

In 2016, the AAI Education Committee initiated a new session focused on improving immunology education: the Immunology Teaching Interest Group (ITIG). The ITIG is an informal group comprised of past speakers and attendees of the ITIG sessions, including current immunology educators spanning a range of institutions and levels. It serves as a resource for novel teaching tools and practices that can be implemented in courses to enhance immunology education. The session has grown from an audience of 20 in 2016 to more than 100 participants in 2019. Because of the great interest in this topic, the AAI Newsletter features "Teaching Tools" articles highlighting ITIG presentations.

Don't Lecture Me! Using Team-Based Learning in Professional Programs



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As an instructor, you probably know the feeling: you are doing your best with your lectures, but your class is just not engaged.

You pretend that those back-row students on their laptops are following along, but in reality you know they are probably on social media. What is a well-intentioned instructor to do? Because lectures are a form of passive learning for students, this article advocates that instructors use active learning methods such as Team Based Learning (TBL).

Like other professors at the Regis University School of Pharmacy, I use TBL to educate my students. TBL requires students to prepare for class beforehand by consulting texts, papers, and/or other media by which the instructor chooses to present new material. I assign students to teams, which I ensure are diverse in regards to academic record, age, and ethnicity. At the beginning of class, students are given an individual readiness assurance test (i-RAT) to measure their preparedness for class. They must maintain an average of 70% or above on i-RATs to pass the course, thus incentivizing students to prioritize class preparation. The i-RAT is followed by an identical team RAT (t-RAT.) All team members share the same t-RAT score.

After the readiness processes, valuable remaining class time is spent with students working in small teams on case

studies and applications. These exercises are designed to help students learn how to apply and extend their basic knowledge in a variety of scenarios. Team members work together to choose the best solution from the options provided. All teams are asked to simultaneously reveal their answer. As the instructor, I then ask teams to defend an answer and facilitate a discussion about the topic. This allows students to receive immediate feedback to questions, and I am better able to understand where they may be struggling with the information so I may provide more directed instruction, such as by a short slide of explanation or reading from a relevant publication.

Each student receives a final grade that includes the i-RAT, t-RAT, and application scores, and a peer evaluation. The breakdown of points between each of these is variable and may be decided by the instructor. However, students must maintain a 70% individual average on their i-RAT and exam scores to earn their team scores.



In addition to being better engaged through this active learning format, students also learn how to work collaboratively with others, a trait necessary in the healthcare field where more and more providers are working as members of patient care teams. As part of Regis's TBL

program, students are taught how to provide effective, constructive feedback to classmates during orientation at the beginning of their program. Students then provide feedback to their peers on a formative basis mid-semester. At semester's end, a summative evaluation by peers is incorporated into each student's final grade.

Although this essay reports on the use of TBL in pharmacy school, the strategy has been used successfully at a variety of levels (undergraduate and graduate) and may be particularly beneficial in other types of healthcare curricula. Students and preceptors in our program report

being better equipped to work in a healthcare team context and to have more productive conversations with patients, nurses, physicians, and therapists than their counterparts from traditional, lecture-based programs.

Experience indicates that success in implementing TBL tends to elude instructors who endeavor to pick and choose parts of the TBL philosophy to follow. While instructors do not have to follow the TBL format in every class—instructors may still lecture as appropriate—it is essential that when executing a TBL experience, all steps (student preparation, i-RAT, t-RAT, exercises, and peer evaluation) be followed.

Readers are encouraged to learn more about TBL and how to implement it in their courses by exploring the resources on the Team Based Learning Collaborative's website: www.teambasedlearning.org/. Site visitors can connect with a TBL consultant, find regional meetings, and learn all about what makes TBL such a successful active learning tool.

